PILOT 1200 WASH

PR-2901

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

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Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of this manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.
Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

ACCESSORIES

THESE ITEMS ARE PACKED TOGETHER WITH THE PROJECTOR

- G clamps (2 PCS)
- XLR cable with 3-pin plug and socket (1 PCS)
- Safety cords (2 PCS)
- This manual (1 PCS)

Ω clamps(Options)(2PCS)

INTRODUCTION

Thank you for purchasing the PILOT 1200 WASH, PR-2901.
This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.
PILOT 1200 WASH is an innovative projector with an elegant housing, which complies to CE norms and standards and uses international protocol DMX 512.
The projector uses PHLIPS MSR 1200 SA/DE discharge lamp and high quality optical system, which produces soft and beautiful light beam. The projector features effects of strobe, rainbow and CYM, so it is suitable for applications in TV station, discotheque, singing and dancing stage, nightclub, etc.

SAFE USAGE OF THE PROJECTOR

When unpacking and before disposing of the carton check there is no transportation damage before using the unit. Should there be any damage caused by transportation, consult your dealer and do not use the unit.

The projector is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other liquids.

The projector is not designed or intended to be mounted on to inflammable surfaces.

The projector is only intended for installation, operation and maintenance by qualified personnel.

The projector must be installed in a location with adequate ventilation, at least 50cm from adjacent wall surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 5m. 5m

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle and/or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any other types of dimmer apparatus.

Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

Keep the lamp clean. Do not touch the lamp glass with bare hand.

The projector should always be installed with a secondary safety fixing. A safety cord is supplied for this; it should be attached as shown in “installing the projector” section.

The lamp used in this projector is a PHLIPS MSR 1200 SA/DE discharge lamp. After switching off don’t attempt to restart the projector until lamp has cooled, this will require approx 15 minutes. Switching the lamp on and off at short intervals will reduce the life of both the lamp and the projector. But occasional breaks will prolong the life of the lamp and projector.

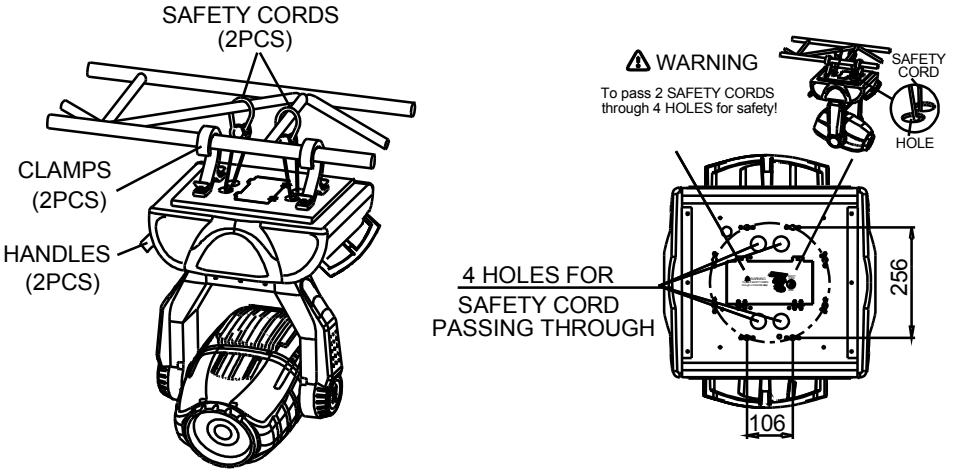
Never run the projector without a lamp.

There is no user serviceable parts inside the projector, do not open the housing and never operate the projector with the covers removed.

Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work.

If you have any questions, don’t hesitate to consult your dealer or manufacturer.

INSTALLING THE PROJECTOR

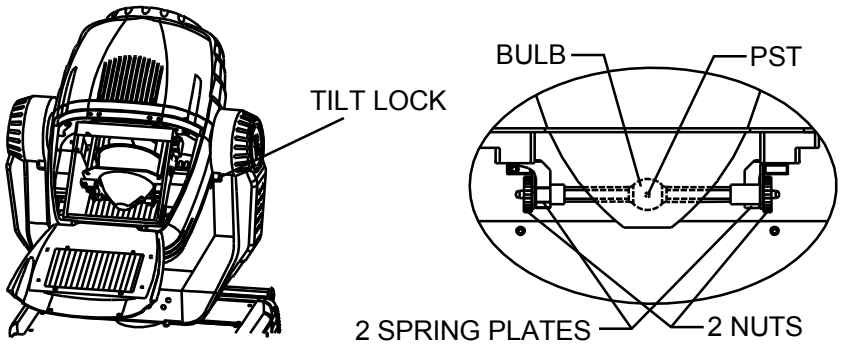


Take 2 clamps and 2 safety cords out from the package and mount 2 clamps on the underside of fixture with 2 retainers attached to each clamp. Hang the fixture on the structure and fasten the screws attached to each clamp. (Read the **WARNING** on the underside of the base as shown above) **To pass 2 SAFETY CORDS through 4 HOLES for safety!** Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the projector is secure and is strong enough to support a weight of PILOT 1200 WASH.

WARNING: 1. Unlock the PAN and TILT before the 1st application of projector for safety.

2. The projector MUST be lifted or carried by the HANDLES instead of clamps.

FITTING THE LAMP



Lock tilt before fitting/replacing the lamp.

Loosen 2 M5 screws and open one of the rear covers, you can see the structure as shown in the figure above.

Loosen 2 nuts at the both ends of lamp and take out the worn-out lamp. Suggest to free one end after another.

Fit new lamp and fasten 2 nuts at the both ends of lamp. Notes: don't touch the bulb of the new lamp with bare hand so as not to influence the beam output; the PST (pumping stem tip off) on the bulb facing the rear cover with fans perpendicularly and being not in the beam's way is a must and aids cooling.

Close the rear cover and fasten 2 M5 screws.

WARNING: The MSR series are high-pressure lamps with external igniters (⚠). Care should always be taken when handling these lamps. Always read the manufacturers "Instructions for use" enclosed with the lamp.

POWER SUPPLY - MAINS

Connect the power cord as follows:

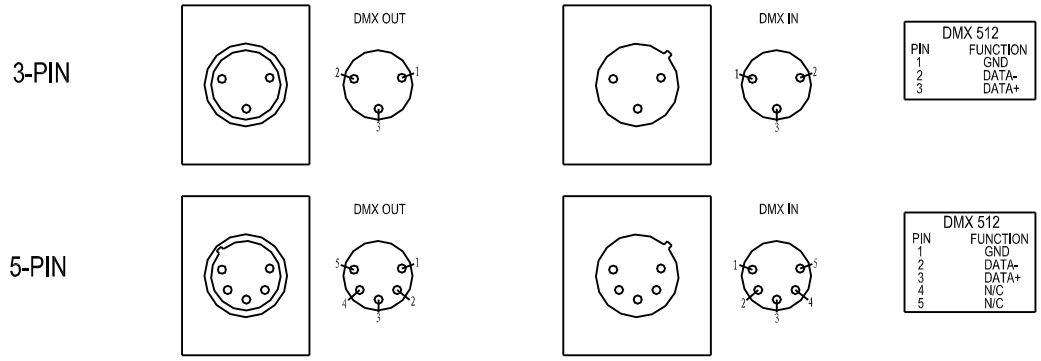
L (live) =brown
E (earth) =yellow/green
N (neutral) =blue

Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector be supplied separately so that they may be individually switched on or off.

IMPORTANT

It is essential that each projector is correctly earthed and the electrical installation conforms to all relevant standards. Power consumption of the PILOT 1200 WASH is 1380W.

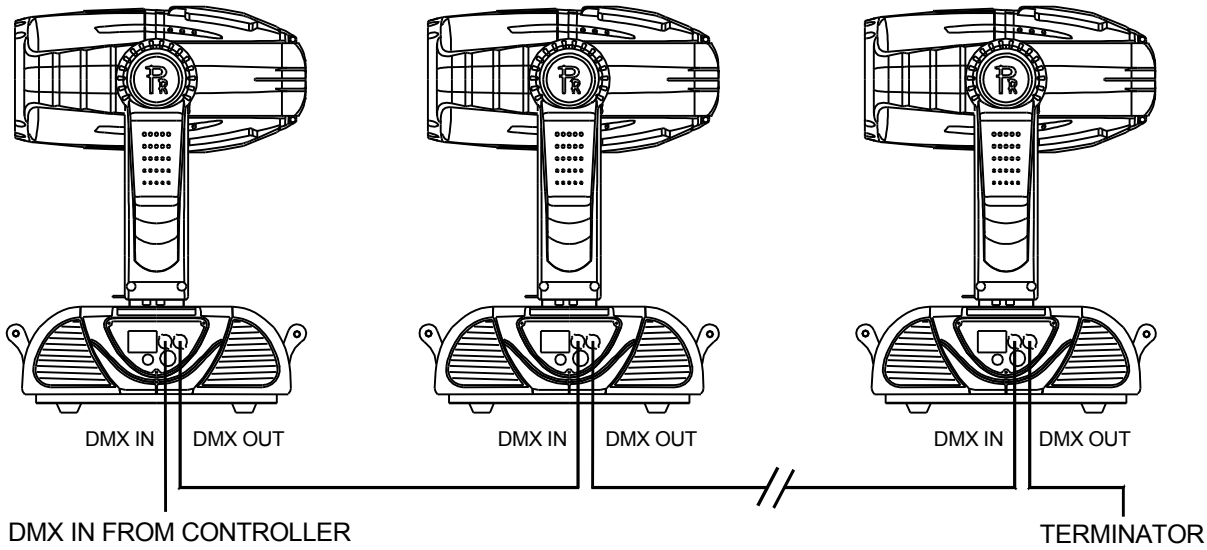
CONTROL CONNECTIONS



Connection between controller and projector and between one projector and another must be made with 2 core-screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3 pin (which are included with the projector) or 5 pin XLR plugs and sockets. The XLR's are connected as shown in the figure above.

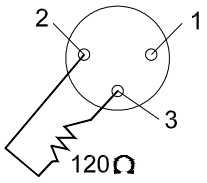
Note: care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. The body of the plug is not connected in any way. The PILOT 1200 WASH accepts digital control signals in protocol DMX512 (1990).

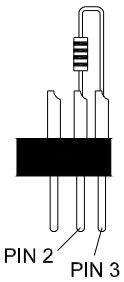
Connect the controller's output to the first fixture's input, and connect the first fixture's output to the second fixture's input and connect the rest fixtures in the same way. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.



DMX TERMINATOR

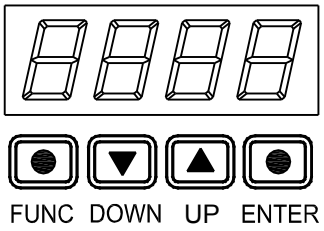
In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.
The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.





DMX TERMINATOR CONNECTION
Connect a 120(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX OUT socket on the last unit in the chain.

SETUP OPTIONS - PROJECTOR CONFIGURATION



Projector configuration can be set conveniently via pressbutton switch and digital display. Turn the projector on and the digital display will show DMX address you set and save last time and it can be reset and saved again as you please.

Press the button ENTER and hold it 5 seconds, the yellow LED is on, which means the panel is unlocked.

Press the button UP or DOWN if you want to browse through the various Setup Options.

Press the button ENTER to save your settings or enter the next menu. Press the button UP or DOWN to shift the display between On and OFF or change the address.

Press the button FUNC, it will return to the upper menu one by one.

TO SET THE DMX START ADDRESS

Each PILOT 1200 WASH must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to “listen” to the digital control information being sent out from the controller.
When ext. channels enabled, the PILOT 1200 WASH has 14 channels, so set the No. 1 projector’s address 001, No. 2 projector’s address 015, No. 3 projector’s address 029, No. 4 projector’s address 043, and so on.
When ext. channels disabled, the PILOT 1200 WASH has 11 channels, so set the No. 1 projector’s address 001, No. 2 projector’s address 012, No. 3 projector’s address 023, No. 4 projector’s address 034, and so on.

Launch the projector. Press the button FUNC to Addr.

Press the button ENTER, it will display 001.

Press the button UP or DOWN, you can set the address.

Press the button ENTER to confirm.

Press the button FUNC, it will return to the upper menu one by one.

FUNCTIONS DISPLAY

- AddR SET ADDR. (Default: 001)
  - 001 ADDR. 001
- RST RESET MENU
  - RST? RESET OR NOT
- CNFG CONFIG. MENU
  - HRES SET DMX EXT. CHANNEL (Default : ON)
    - ON DMX EXT. CHANNEL ENABLED
    - OFF DMX EXT. CHANNEL DISABLED
  - CTRL SET DMX CONTROL CHANNEL (Default : ON)
    - ON DMX CONTROL CHANNEL ENABLED
    - OFF DMX CONTROL CHANNEL DISABLED
  - LAMP SET LAMP CONTROL MODE (Default:CTRL)
    - CTRL BY CONTROL CHANNEL
    - ON BY LAMP MENU
    - dMX BY DMX SIGNAL EXISTING OR NOT
- OPTN OPTION MENU
  - COLR SET COLOUR FILTERS (Default : STEP)
    - STEP LINEAR ROTATION DISABLED
    - LIN LINEAR ROTATION ENABLED
  - P\IN SET ROTATION OF PAN (Default:OFF)
    - OFF FORWARD ROTATION
    - ON REVERSE ROTATION
  - T\IN SET ROTATION OF TILT (Default:OFF)
    - OFF FORWARD ROTATION
    - ON REVERSE ROTATION
  - PT\S SET PAN&TILT SWAP (Default:OFF)
    - OFF PAN&TILT SWAP OFF
    - ON PAN&TILT SWAP ON
  - d\IN SET DIMMER INVERT(Default:OFF)
    - OFF DIMMER INVERT OFF
    - ON DIMMER INVERT ON
  - Z\IN SET ZOOM INVERT (Default:OFF)
    - OFF ZOOM INVERT OFF
    - ON ZOOM INVERT ON
  - C\IN SET CYM INVERT (Default:OFF)
    - OFF CYM INVERT OFF
    - ON CYM INVERT ON
  - dFLT RESET (Default : OFF)
    - OFF DISABLED
    - ON ENABLED AND LOAD ALL DEFAULTS

(CONTINUE)

- DISP DISPLAY MENU(Default: ON)
  - d\IM LCD OF PANEL DISPLAY MODE
    - ON LCD IS ON
    - OFF LCD IS OFF AFTER DELY
    - dIM LCD IS DARK
- INFO INFORMATION MENU
  - L\HR DISPLAY LAMP'S USING TIME OR SET TO 0
    - 0 DISPLAY LAMP'S USING TIME
      - RST? SET TO 0 OR NOT
  - T\HR DISPLAY PROJECTOR'S USING TIME (CANNOT RESET)
    - 0 DISPLAY PROJECTOR'S USING TIME
  - TEMP DISPLAY TEMPERATURE
    - MSTR DISPLAY MAIN PCB'S TEMPERATUER
      - 0
    - dRV'1 DISPLAY DRIVER PCB Ⅰ'S TEMPERATURE
      - 0
    - dRV'2 DISPLAY DRIVER PCB Ⅱ'S TEMPERATURE
      - 0
    - bASE DISPLAY PAN&TILT DRIVER PCB'S TEMPERATURE
      - 0
    - HEAd DISPLAY HEAD'S TEMPERATUER
      - N/A RESERVED
  - 'VER DISPLAY PROGRAM VERSION
    - MSTR DISPLAY MAIN PCB'S PROGRAM VER.
      - 0
    - dRV'1 DISPLAY MOTOR DRIVER PCB Ⅰ'S PROGRAM VER.
      - 0
    - dRV'2 DISPLAY MOTOR DRIVER PCB Ⅱ'S PROGRAM VER.
      - 0
    - P\T DISPLAY PAN&TILT DRIVER PCB'S PROGRAM VER.
      - 0
    - PWR DISPLAY POWER PCB'S PROGRAM VER.
      - 0
- TEST TEST MENU
  - SET DEBUG MODE (Default:OFF)
    - OFF EXIT DEBUG MODE AND RESET
    - ON ACCESS DEBUG MODE
  - SELF SELF-TEST MODE (Default:OFF)
    - OFF RESERVED
    - ON SELF-TEST MODE
      - OFF EXIT TEST-MODE AND RESET
      - ON SELF-TEST MODE
- LAMP LAMP MENU（Default：STAT）
  - STAT DISPLAY STATE OF LAMP
  - ON ON
  - OFF OFF

(END)

DMX CONTROL CHANNEL FUNCTIONS

The PILOT 1200 WASH uses 14 DMX channels. They are listed in the following table.

ITEM	CHANNEL	DMX	DESCRIPTION
1	Strobe	000-010	Shuttering
		011-020	White
		021-034	Strobe 1
		035-048	Strobe 2
		049-062	Strobe 3
		063-076	Strobe 4
		077-090	Strobe 5
		091-104	Strobe 6
		105-118	Strobe 7
		119-132	Strobe 8
		133-146	Strobe 9
		147-160	Strobe 10
		161-174	Strobe 11
		175-188	Strobe 12
		189-202	Strobe 13
		203-216	Strobe 14
		217-230	Strobe 15
		231-244	Strobe 16
		245-255	White
2	Iris / Dimmer	000-255	0=wholly open; 255=wholly closed
3	Zoom	000-255	Zooming with spot from large to small
4	Colour Wheel	000-016	White. Note: stay 5 seconds while DMX value is 5, 6or 7, the function reset perform
		017-034	Colour filter 1
		035-052	Colour filter 2
		053-070	Colour filter 3
		071-088	Colour filter 4
		089-106	Colour filter 5
		107-127	White
		128-133	Rotation speed 1
		134-139	Rotation speed 2
		140-145	Rotation speed 3
		146-151	Rotation speed 4
		152-157	Rotation speed 5
		158-163	Rotation speed 6
		164-169	Rotation speed 7
		170-175	Rotation speed 8
		176-181	Rotation speed 9
		182-187	Rotation speed 10
		188-195	Stop rotating
		196-201	Reverse rotation speed 1
		202-207	Reverse rotation speed 2
		208-213	Reverse rotation speed 3
		214-219	Reverse rotation speed 4
		220-225	Reverse rotation speed 5
		226-231	Reverse rotation speed 6
		232-237	Reverse rotation speed 7
		238-243	Reverse rotation speed 8
		244-249	Reverse rotation speed 9

		250-255	Reverse rotation speed 10
5	Pan	000-255	Pan rotation
6	Tilt	000-255	Tilt rotation
7	CYM-Cyan	000-127	Cyan enter gradually
		128-187	Cyan from light to dark
		188-197	Stop
		198-255	Cyan from dark to light
8	CYM-Yellow	000-127	Yellow enter gradually
		128-187	Yellow from light to dark
		188-197	Stop
		198-255	Yellow from dark to light
9	CYM-Magenta	000-127	Magenta enter gradually
		128-187	Magenta from light to dark
		188-197	Stop
		198-255	Magenta from dark to light
10	Effect Wheel	000-042	White
		043-084	Effect 1
		085-127	Effect 2
		128-255	Fresnel effect index
11	Pan & Tilt Speed	000-255	From slow to fast
12	Pan Fine	000-255	Pan rotation in 16 Bit precision
13	Tilt Fine	000-255	Tilt rotation in 16 Bit precision
14	Control (when ext. channels disabled, this channel performed by channel 11)	000-048	Reserved
		049-080	Reset
		081-112	Reserved
		113-144	Lamp off 10 seconds later
		145-223	Reserved
		224-255	Lamp on

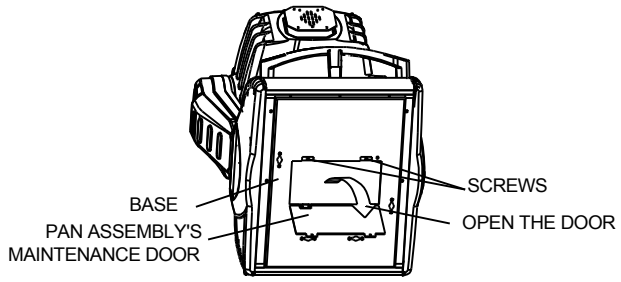
LED DISPLAY

Green:	ON——DMX signal OK or Slave;
	OFF——No DMX signal;
	Flash——DMX error;
Red:	Medium flash——Menu mode;
	Fast flash——software, cpu error;
Both ON:	Address mode,
Flash in turn:	Master mode.

CHANGING BELTS

Pan's belts

Free 2 screws on Pan assembly's maintenance door and open the door; change the belts; close the door and fasten the screws.



Tilt's belts

The common users replacing the belts is not recommended.

MAINTENANCE

If the projector's lens becomes damaged or broken it should be replaced. If the lamp becomes damaged or deformed in any way it must be replaced. If the light from the lamp appears dim this would normally indicate that it is reaching the end of its life and it should be changed at once, aged lamps run to the extremity of their life might explode. If the projector does not function, check the fuses on the power socket of the projector, they should only be replaced by fuses of the same specification. Should these be damaged call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating, should either of these operate, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again. Check that the fans are operational, if not call a qualified technician.
Any maintenance work should only be carried out by qualified technicians.

LUBRICATION

To ensure linear motion of the lens, it is recommended that the 3 shafts for the focusing lens holder be lubricated periodically, preferably every two months. Use only high quality, high-temperature resistant grease instead of any type of oil.

KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. **Do NOT use any type of solvent on dichroic colour filters.**

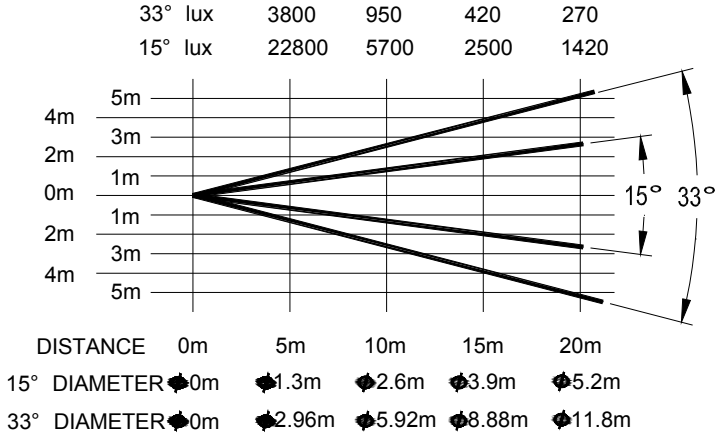
Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning. It is recommended to clean the external optics at least once every 20 days and clean the internal optics at least once every 30 / 60 days.

Do not use any organic solvent, e.g. alcohol, to clean the reflector mirror, dichroic colour filters or housing of the apparatus.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION
The projector doesn't switch on	-The power supply is not present -The lamp doesn't work	Check the fuse on the power socket. Replace the lamp.
The lamp comes on but the projector doesn't respond to the controller	-Wrong DMX configuration and/or start address - Defective DMX cable	Make sure that the projector is correctly configurated. Replace or repair the DMX cable.
The projector only functions intermittently	-The fan has failed	Make sure the fan is working and not dirty.
Defective projection	-The lens is broken -Dust or grease on lenses	Check the lenses are not broken. Remove dust or grease from the lenses.
The projected image appears to have a halo	-Installation of the lamp is not correct -Dust or grease contamination on the optics.	Make sure the lamp is installed correctly. Carefully clean the optical group lenses and the projector components.
The beam appears dim	-Dust or grease contamination on the optics. -The lamp is at the end of its life	Check the optics is clean. Replace with a new lamp of the specified type and rating.

LIGHT OUTPUT



TECHNICAL DATA

VOLTAGES: 200/220/230/245V AC, 50Hz or 60Hz

POWER CONSUMPTION:

1380W

LAMP: Type: PHILIPS MSR 1200 SA/DE or OSRAM HMI 1200 W/S
Colour Temperature: 6000ºK
Socket: SFc10-4, double ends
Manufacturers Rated Lamp Life: 750 Hours

COLOURS:

Linear CYM colour mixing system from 0-100% with macro function
1 colour wheel with 5 Dichroic colours plus white
bicolour and bidirectional rainbow effects, linear and nonlinear colour shifting

EFFECTS:

White, 1 CTO (6000°K-3200°K), 1 frost and 1 fresnel lens

DIMMER:

Large diameter iris, 0-100% linearly adjustable

STROBE:

Double shutter blades, 0.3 – 6 F.P.S.

HEAD MOVEMENT:

Pan 540º, Tilt 270º

BEAM ANGLE:

15º--33º linearly adjustable

CONTROL:

DMX512, 11 Channels plus 3 16Bit HI precision channels

RUNNING MODE:

DMX Controller

OTHER FUNCTIONS:

Forward and reverse rotation of PAN & TILT
PAN & TILT rotation in 16 Bit precision
PAN & TILT Speed, adjustable
Remote reset
Lamp ON/OFF, remote or controlled by panel
Display the using time of lamp and luminaire

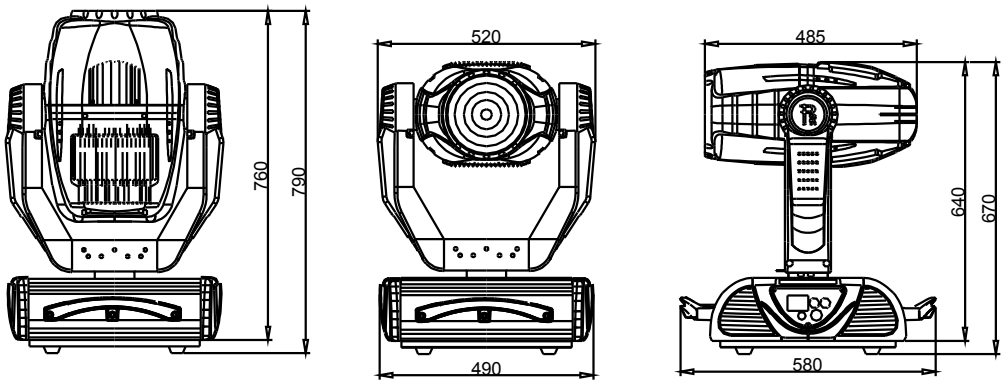
HOUSING:

Metal and composite plastic (IP20)

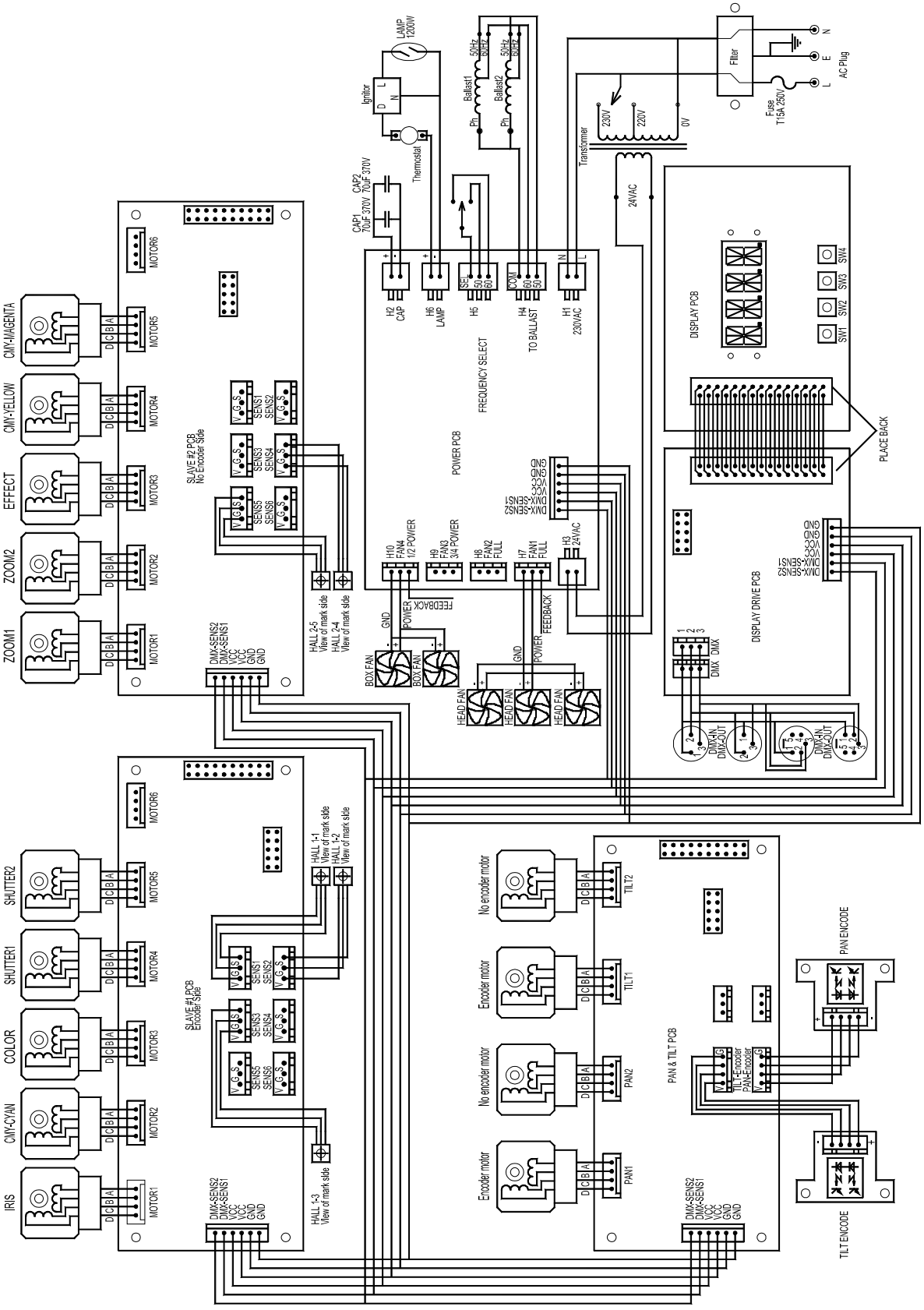
WEIGHT:

42Kg.

SIZES:



ELECTRICAL DIAGRAM



COMPONENT ORDER CODES

NAME	PART NO.	QUANTITY	REMARK
TRANSFORMER	040030061	1	220/230V
	040030054	1	200/240
THERMOSTAT	190010035	1	KSD020 120℃/15A/250V
CAPACITOR	140010043	1	70μF/370V
BALLAST	040070059	2	230V/50-60Hz, 575W
IGNITOR	040090036	1	575~1200W 3~5KV
LAMP	100050054	1	MSR 1200W SA/DE
FUSE	270041044	1	T15a/250V 6.35*32
PAN&TILT DRIVE BELT	290151221	4	HTD459-3M-6
FAN IN BODY	030060031	1	KDE2408PTB-6 24VDC
FAN ON THE REAR COVER	030060039	2	NMB BG0903-B054-000-T0
FAN IN BASE	030060048	2	AD0924HB-A70GL
PAN MOTOR	030040089		23HS2039L 6.35x25
TILT MOTOR	030040089	2	23HS2039L 6.35x25
CYM-MAGENTA MOTOR	030040094	1	17HD0013-35L 5*20
CYM-YELLOW MOTOR	030040094	1	17HD0013-35L 5*20
ZOOM MOTOR	030040094	2	17HD0013-35L 5*20
CYM-CYAN MOTOR	030040112	1	17HD0013-38L 5*15
STROBE MOTOR	030040112	2	17HD0013-38L 5*15
IRIS MOTOR	030040112	1	17HD0013-38L 5*15
EFFECT WHEEL	030040112	1	17HD0013-38L 5*15
PAN&TILT DRIVE PCB	230020091	1	
MOTOR DRIVER PCB Ⅰ	230020120	1	
MOTOR DRIVER PCB Ⅱ	230020121	1	
DIGITAL PCB	230020122	1	
POWER PCB	230020098	1	

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